

Memorandum

To	Travis Erny and Moriah Bucy	Page 1
CC	Mark Engdahl, Margaret Zebley, Ann Colpitts, Jay Dablow	
Subject	Monthly Remedial Action Progress Report KRY Site – September 2014	
From	Doug Brannan	
Date	October 3, 2014	

Summary of Activities for the Month:

- LTU and Dioxin/Furans Soil Repository:** Work in August consisted of: Collected 10 random samples from the non-comingled LTU; collected 10 random and grid samples from the comingled LTU; new bird deterrents were installed on both retention ponds. A monthly MDEQ conference call was held. Meeting minutes were posted after the meeting to Project Direct. Other activities are provided below.
 - 9/3/14 – MDEQ emailed BNSF approval to proceed with collecting grid samples from the comingled LTU.
 - 9/19/14 – BNSF received comments from MDEQ on the LTU Operational Plan for 2014 Rev 2.
 - 9/5/14 – MDEQ received photos of the temporary repository cover.
 - 9/26/14 – BNSF submitted to MDEQ the PCP LTU Operational Plan for 2014 Rev 3.

The status of sample submittals and approvals are provided in the following table:

Sample Location	Submittal to MDEQ Date	MDEQ Response Date
Comingled Grid Sampling	Pending October Submittal	NA

This remedy component is approximately 60% complete for 2014.

- Long-term Groundwater Monitoring:** Resampling of RW-13 will occur during the October 13, 2014 sampling event.
 - 9/18/14 – BNSF notified MDEQ of a Dioxins/Furans detect at RW-13.
 - 9/24/14 – MDEQ provided options for resampling or waiting until the October 13, 2014 sampling event for RW-13.

The next groundwater monitoring event is planned for October 13 to 17, 2014. This remedy component is approximately 45% complete for 2014.

- Chemical Oxidation of Groundwater:** No actions occurred in August. This remedy component is approximately 0% complete for 2014.

4. **Free-Product Recovery (Western and Eastern KRY):** Absorbent socks were placed in KRY111A, KRY 114A, OMW-6, AMW-8, OMW-4a, and KPT-21 in January 2014 and have been monitored and changed out when saturated since that time. All absorbent socks were removed from wells during the week of July 7 to allow the wells to equilibrate prior to groundwater sampling. Absorbent socks were installed in KRY111A and KRY114 after the groundwater sampling event was complete. Well MW-23 was gauged in September and product was removed from the well by total fluids extraction. LNAPL removed from MW-23 in September totaled 3.82 gallons. The LNAPL recovery activity for this remedy component is approximately 70% complete for 2014.

- 9/3/14 – BNSF submitted to MDEQ an e-mail to perform a bail down test at MW-5.
- 9/5/14 – MDEQ e-mailed BNSF stating MDEQ does not object to conducting the MW-5 bail down test.
- 9/11/14 – Bail down test at MW-5 was completed.
- 9/22/14 to 9/26/14 – Perform field implementation of the 2014 Eastern LNAPL Investigation Rev 2 memo.

5. **Sawdust:**

No action occurred in September. This remedy component is 0% complete for 2014.

6. **All Remedy Components:**

There is no additional information for September.

Problems Encountered and Solutions:

1. No problems encountered in September.

Communication with KRY Project Stakeholders:

1. 9/4/14 – AECOM sent Sam Dimmick Glacier Stones Health and Safety officer the dissolved metals results for the wells sampled in Glacier Stones operating area.

Budget Status:

This section summarizes costs by BNSF's contractors attributed to each remedy component for the period from August 2009 through August 2014. Note that the costs cover more work than described in the current progress report. The costs do not include MDEQ oversight costs. Cost for BNSF transportation has been added during this period.

ROD Remedy Component	Amount Invoiced in September for August Work	Total Amount Invoiced-to-Date
Free-Product Recovery	\$ 2,129.73	\$ 124,339.00
Sawdust Sampling	\$ -	\$ 186,694.21
Excavation, Ex-Situ Treatment, and Backfill	\$ 292,386.04	\$ 6,275,080.50
Sludge Removal	\$ 63.00	\$ 3,574,542.56
Lead Soils Removal	\$ -	\$ 570,880.93
Free-product Removal by Excavation	\$ 9,839.39	\$ 2,201,678.10

ROD Remedy Component	Amount Invoiced in September for August Work	Total Amount Invoiced-to-Date
Chemical Oxidation	\$ 1,767.70	\$ 5,299,103.35
Dioxin/Furan Soils Repository	\$ 27,919.97	\$ 3,779,910.60
MNA and Site-Wide Elements	\$ 16,166.23	\$ 293,750.11
TOTAL	\$ 350,272.07	\$ 22,305,979.35

Anticipated Activities, Milestones and Deadlines for October 2014:

1. **LTUs/ Dioxin Repository:** Operational activities in October are expected to include: soil removal from the comingled LTU, irrigate and till the non-comingled LTU, add nutrients to the LTU pending DEQ approval or grid sampling, submittal of the Construction Completion Report, and ongoing communication with stakeholders as needed. There will also be data validation and submittal preparation of the comingled grid sampling and non-comingled random sampling.
2. **Long-term Monitoring:** Submittal of groundwater and residential well sampling results. Submittal of the groundwater monitoring report to summarize sampling results. Submittal of the long term groundwater monitoring plan. Submittal of a summary report for the July soil and groundwater investigation. Sampling of groundwater and residential wells to occur the week of October 13, 2014.
3. **Chemical Oxidation:** Evaluate results of groundwater investigation and plan for 2015 groundwater remedy.
4. **Free Product Recovery (Western and Eastern KRY):** Western KRY, continue to monitor absorbent socks in KRY111A, and KRY 114A and remove when saturated. Perform a baildown test on MW-5 pending MDEQ approval and add absorbent sock. Eastern KRY, total fluids extraction in MW-23 during October and store fluids in a drum on secondary containment in the blue conex. Evaluate Eastern LNAPL investigation results.
5. **Sawdust:** Sampling to be completed in October 2014 concurrent with Fall groundwater sampling.
6. **All Remedy Components:** Update site conceptual model.

Summary of Recently Submitted Reports to MDEQ by BNSF Awaiting MDEQ Response

Date	Report Title
6/28/12	Phase 1 In Situ Chemical Oxidation Report (ERM)
9/26/14	LTU Operational Plan Revision 3 (AECOM)